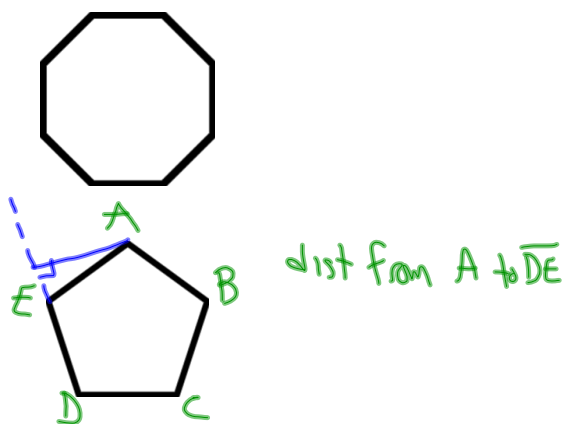
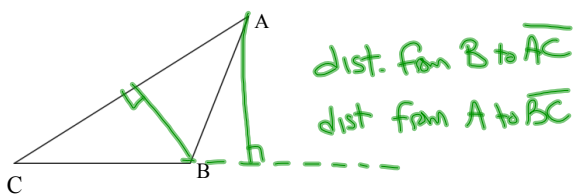


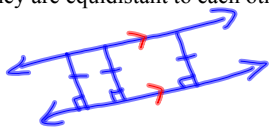
Reminder: Test Block Day Chapter 3

3-6 Perpendiculars and Distance

Distance between a point and a line--is the length of a perpendicular segment to the line.



Distance between parallel lines--Two lines are \parallel if they are equidistant to each other.

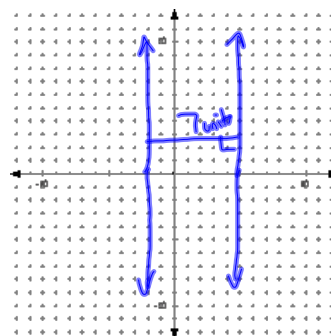


Theorem 3.9--In a plane, if 2 lines are each equidistant from a 3rd line, then the 2 lines are parallel to each other.

Examples

$$x = 5$$

$$x = -2$$



Find distance between the lines.

$$d = |5 - (-2)| = 7$$

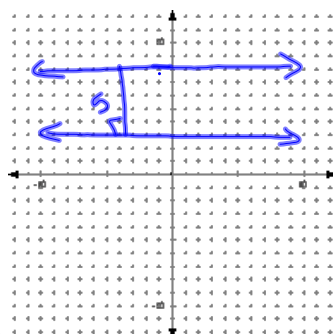
Examples

$$y = 3$$

$$y = 8$$

Find distance.

$$d = |8 - 3| = 5$$



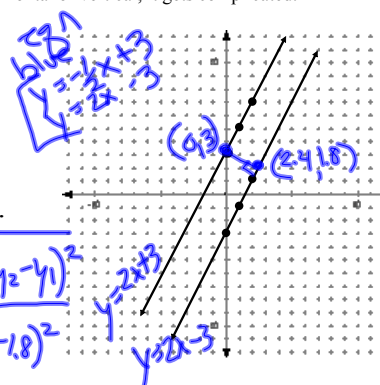
If both lines are not horizontal or vertical, it gets complicated.

$$y = 2x + 3$$

$$y = 2x - 3$$

Find Distance.

$$\begin{aligned} d &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(0 - 2.4)^2 + (3 - 1.8)^2} \\ &= 2.68 \text{ units} \end{aligned}$$



HW

p162-163

11-15, 17-20, 32a, b

For #s 17 and 18:

Draw in the distance, but do not find.